

Accessing MATLAB

Week 2

MEMS 1140—Introduction to Programming in Mechanical
Engineering

Learning Objectives (L.O.)

At the end of this lecture, you should understand/be able to:

- ❑ The options for accessing MATLAB;
- ❑ The Pros/Cons of MATLAB Online;
- ❑ Access MATLAB Online;
- ❑ The Pros/Cons of MATLAB Desktop;
- ❑ Access MATLAB Desktop.

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1 – Options for Using MATLAB

MATLAB can be accessed either via MATLAB Online or with a local installation on your computer.

⇒ L.O.1

□ L.O.2

□ L.O.3

□ L.O.4

□ L.O.5

MATLAB Online is recommended for this course.

All content in this course can be completed in either environment, whether using MATLAB Online or a local installation.

2 – Online—Pros & Cons

Advantages of MATLAB Online

- Up to date and includes all packages;
- Powerful cloud computing;
- Cloud storage (e.g. MATLAB Drive, OneDrive).

Disadvantages of MATLAB Online

- Internet access is required.

✓ L.O.1

⇒ L.O.2

□ L.O.3

□ L.O.4

□ L.O.5

3 – Accessing MATLAB Online

✓ L.O.1

✓ L.O.2

⇒ L.O.3

□ L.O.4

□ L.O.5

Click to navigate to  **Mathworks' Website**

Click the button “Open MATLAB Online”

If you **already** have a Mathworks account:

Please go to the next slide if you do not already have an account.

- Enter your **Pitt** email address (e.g. abc123@pitt.edu);
- At the Pitt login portal, enter your Pitt credentials;
- Complete the 2FA process in Duo to finish logging in;
- Click the button “Open MATLAB Online.”

3 – Accessing MATLAB Online

✓ L.O.1

✓ L.O.2

⇒ L.O.3

□ L.O.4

□ L.O.5

If you **do not** have a Mathworks account:

Please go to the previous slide if you already have an account.

- Click “Create one!”;
- Enter your **Pitt** email address (e.g. abc123@pitt.edu);
- Create a password;
- At the Pitt login portal, enter your Pitt credentials;
- Complete the 2FA process in Duo to finish logging in;
- Click the button “Open MATLAB Online.”

4 – Desktop—Pros & Cons

✓ L.O.1

✓ L.O.2

✓ L.O.3

⇒ L.O.4

□ L.O.5

Advantages of MATLAB Desktop

- Does not require internet access;
- Extensible to distributed computing platforms.

Disadvantages of MATLAB Desktop

- The application takes up hard drive space;
- Running code may slow down your computer;
- Toolboxes/new versions are not automatically installed.

5 – Accessing MATLAB Desktop

✓ L.O.1

✓ L.O.2

✓ L.O.3

✓ L.O.4

⇒ L.O.5

Click to navigate to  **Pitt Software Download Service**

- Search for “MATLAB Current Release”
- Click on any of the 3 options (they are identical)
- Expand “Installation Instructions” (Click “Download” button)
- Click “Sign into MATLAB Portal”
- Click “Sign in to get started”

Continue on the following slides.

5 – Accessing MATLAB Desktop

✓ L.O.1

✓ L.O.2

✓ L.O.3

✓ L.O.4

⇒ L.O.5

If you **already** have a Mathworks account:

Please go to the next slide if you do not already have an account.

- Enter your **Pitt** email address (e.g. abc123@pitt.edu)
- At the Pitt login portal, enter your Pitt credentials
- Complete the 2FA process in Duo to finish logging in
- Click “Get Started”
- Click “Install MATLAB”

Continue installation instructions [here](#)

5 – Accessing MATLAB Desktop

✓ L.O.1

✓ L.O.2

✓ L.O.3

✓ L.O.4

⇒ L.O.5

If you **do not already have a Mathworks account**:

Please go to the previous slide if you already have an account.

- Click “Create one!”
- Enter your **Pitt** email address (no aliases)
- Create a password
- At the Pitt login portal, enter your Pitt credentials
- Complete the 2FA process through Duo to finish logging in

[Continue installation instructions here](#)

5 – Installation

Installation is unique for different operating systems.

Mathworks provides options for Windows, MacOS, and Linux.

Navigate to the appropriate instructions with the hyperlinks below.

Go to **Windows** installation instructions

Go to **MacOS** installation instructions

Go to **Linux** installation instructions

✓ L.O.1

✓ L.O.2

✓ L.O.3

✓ L.O.4

⇒ L.O.5

5 – Windows Installation

This manual includes detailed steps for installing MATLAB on **Windows** computers.

There are visual aids provided to guide you.

*GeeksforGeeks use MATLAB R2020a, which is from 2020. This is **not** a problem. The process is essentially identical for this year's version.*

Click here for **Windows** installation instructions

✓ L.O.1

✓ L.O.2

✓ L.O.3

✓ L.O.4

⇒ L.O.5

5 – MacOS Installation

Important: Check your computer's processor (Intel or Apple Silicon) and download the correct file.

This instruction manual includes detailed steps for installing MATLAB on **MacOS** computers.

There are visual aids provided to guide you.

*GeeksforGeeks use MATLAB R2021a, which is from 2021 for Intel processors. This is **not** a problem. The process is essentially identical for this year's version with Intel and Apple Silicon.*

[Click here for MacOS installation instructions](#)

✓ L.O.1

✓ L.O.2

✓ L.O.3

✓ L.O.4

⇒ L.O.5

5 – Linux Installation

This instruction manual includes detailed steps for installing MATLAB on **Linux** computers.

There are visual aids provided to guide you.

*GeeksforGeeks use MATLAB R2021a, which is from 2021. This is **not** a problem. The process should be essentially identical for this year's version.*

[Click here for **Linux** installation instructions](#)

✓ L.O.1

✓ L.O.2

✓ L.O.3

✓ L.O.4

⇒ L.O.5

6 – Summary

This lecture covered:

- ✓ The options for accessing MATLAB

Mathworks provides MATLAB via the online portal or with a Desktop installation.

- ✓ The Pros/Cons of MATLAB Online

Easy access, automatic updates, and cloud functionality make MATLAB Online the recommended platform for this course. Being tied to internet access is inconsequential for this course.

✓ L.O.1

✓ L.O.2

✓ L.O.3

✓ L.O.4

✓ L.O.5

6 – Summary

✓ L.O.1

✓ L.O.2

✓ L.O.3

✓ L.O.4

✓ L.O.5

✓ The Pros/Cons of MATLAB Desktop

MATLAB Desktop is more powerful for large programs on computers that have powerful hardware. But the content of this course does not justify sacrificing storage space, the impacts to system performance, and manual installation.

✓ How to access MATLAB Online and Desktop

Instructions are provided for logging into MATLAB Online, and for the Desktop installation process (Windows, MacOS and Linux).